

New York State Department of Transportation

Yellow Flag NB22CTW018

By: Rehan Afridi

Flag Date: April 26, 2022

Superseding Information:

This flag supersedes: YF NB2158W022

Structure Information

BIN: 1065318

Feature Carried: 278I278IX2M23027

Feature Crossed: 6TH AVENUE

Orientation: 8 - NORTHWEST

Region: 11 - NEW YORK CITY

County: KINGS

Political Unit: City of NEW YORK

Approximate Year Built: 1962

Posted Load Matches Inventory : Yes

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party

Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 322

Verbal Notification Information

Person Notified: Heinz Joachim, P.E.

Date: April 26, 2022 10:00:00 AM

Of: NYSDOT Region 11

Signature Information

Signature: Rehan Afridi, P.E. 075185

Date: May 11, 2022

Reviewed By: Robert Kemp

Date: May 11, 2022

Attachments: 5

Flagged Elements

Parent Element	Element	Total Quantity	Unit
Span Number : 101			
	107 - Steel Open Girder/Beam	781	ft
	PR831 - Steel Beam End	34	each

Flagged Condition Description

This Yellow Flag No. NB22CTW018 supersedes previously issued Yellow Flag No. NB2158W022.

Location: Span 101 Girder G5 at Pier 100

Description: The end of Girder G5 in Span 101 at Pier 100 exhibits severe corrosion resulting in an overall web bearing area section loss of approximately 41% and an overall shear web area section loss of approximately 48% with an average overall localized section loss of approximately 51% for 6"L x 8"H area directly above the bearing below the guide angle. Also, the lower web of the girder adjacent to the web bearing area exhibits average 30% section loss for 2'L x 4"-7"H above the bottom flange. In addition, the bottom flange adjacent to the bearing exhibits 50% edge section loss at both sides for 2'L x 3"W. (Refer to sketch for more details). These conditions are the same as reported in the last inspection.

This girder is located above an expansion bearing.

Notes:

1.The adjacent Girder G4 up to 35% section loss in the lower web above the bottom flange and 25% section loss for the full height of the web adjacent to the guide angle. Also, the bottom flange exhibits 25% section loss in the bottom flange (no change since the last inspection).

2.The adjacent Girder G6 exhibits average 47% (previously 42%) localized section loss in the lower web above the bearing area with up to 35% section loss in the lower web for 4' long area adjacent to the bearing and up to 30% section loss for the full height of the web adjacent to the guide angle.

3.The flagged condition is located above the parking lot area and was accessed using 30ft bucket truck.

Flag Photographs

Photo Number: 1

Photo Filename: Photo 1-RA 620_0948.jpg



Attachment Description: General view of the flag location at Girder G5 in Span 101 at Pier 100. Looking Begin.

Photo Number: 2

Photo Filename: Photo 2-RA 620_0956.jpg



Attachment Description: The Right Face of Girder G5 in Span 101 at Pier 100. The end of the girder exhibits severe section loss at the lower web above the bottom flange and web height adjacent to the guide angle with section loss at the bottom flange. Looking Left.

Photo Number: 3

Photo Filename: Photo 3-RA 620_0959.jpg



Attachment Description: The Left Face of Girder G5 in Span 101 at Pier 100. The end of the girder exhibits severe section loss at the lower web above the bottom flange and web height adjacent to the guide angle with section loss at the bottom flange. Looking Right.

Photo Number: 4

Photo Filename: Girder Section Loss Sketch.jpg

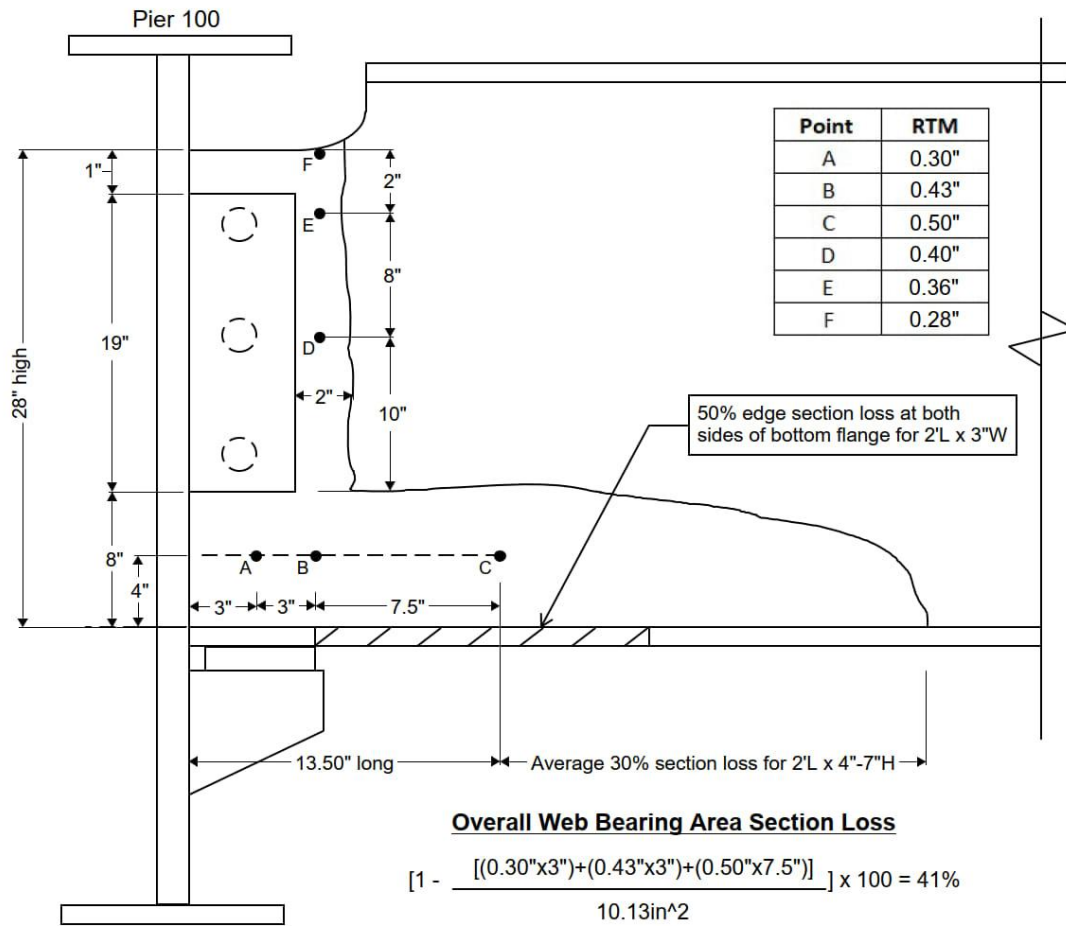
Right Face of Girder G5 Sketch in Span 101 at Pier 100

N.T.S.

DATE 04/26/2022

TEAM LEADER Rehan Afridi, P.E.

ASSISTANT TEAM LEADER Marcos Perez

**Overall Web Bearing Area Section Loss**

$$\left[1 - \frac{[(0.30" \times 3") + (0.43" \times 3") + (0.50" \times 7.5")]}{10.13 \text{ in}^2} \right] \times 100 = 41\%$$

Overall Shear Web Area Section Loss

$$\left[1 - \frac{[(0.43" \times 8") + (0.40" \times 10") + (0.36" \times 8") + (0.28" \times 2")]}{21 \text{ in}^2} \right] \times 100 = 48\%$$

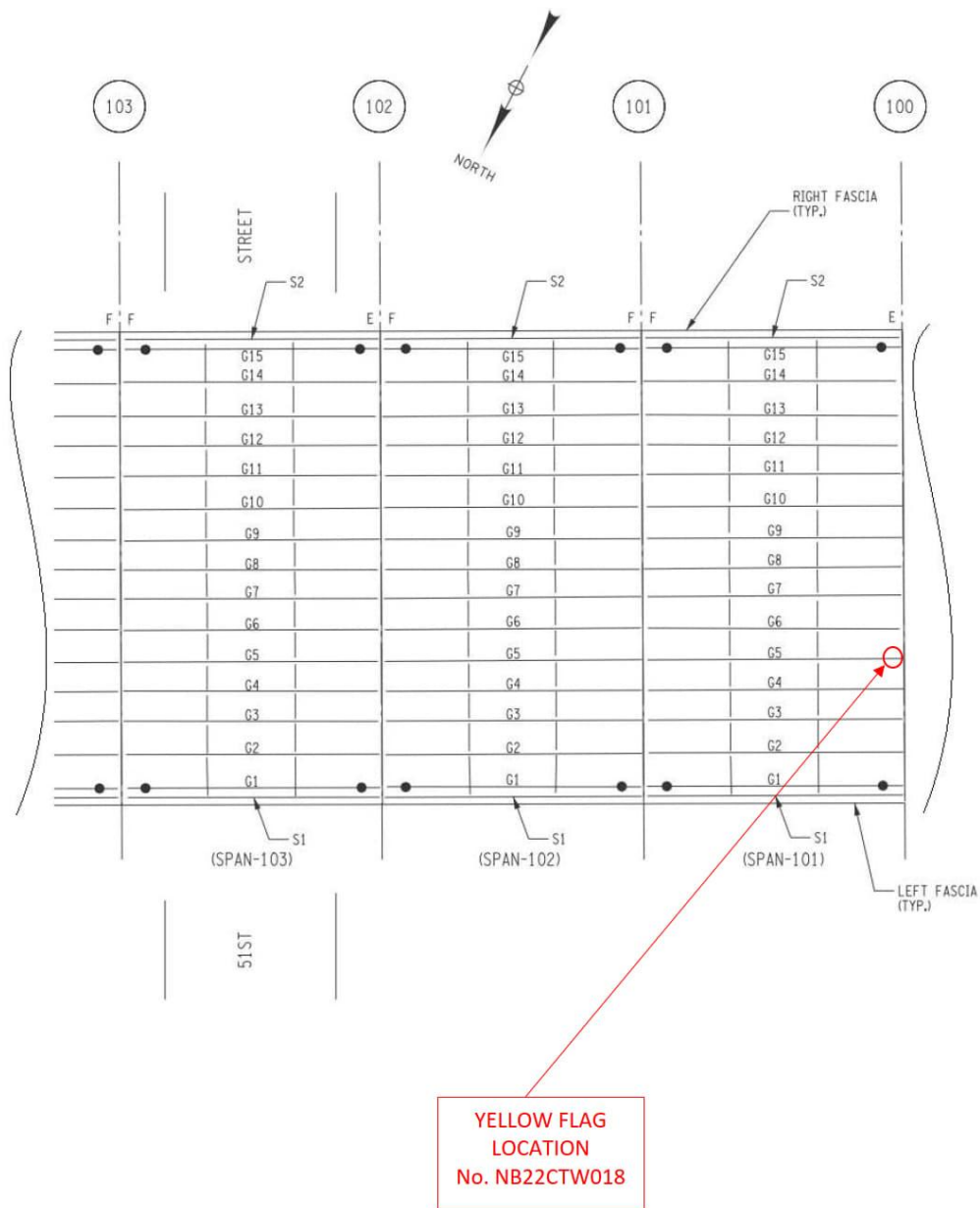
Notes:

- As-built web thickness = 0.75"
- Length of bearing area = 18 x web thickness = 18 x 0.75" = 13.50"
- Overall bearing area = 13.50" x 0.75" = 10.13 in²
- As-built shearing web area = 28" x 0.75" = 21 in²
- Adjacent Girder G4 exhibits up to 35% section loss in the lower web above the bottom flange and 25% section loss for the full height of the web adjacent to the guide angle. Also, the bottom flange exhibits 25% section loss in the bottom flange.
- Adjacent Girder G6 exhibits average 42% localized section loss in the lower web above the bearing area with up to 35% section loss in the lower web for 4' long area adjacent to the bearing and up to 30% section loss for the full height of the web adjacent to the guide angle.

Attachment Description: Sketch of G5 at Pier 100

Photo Number: 5

Photo Filename: Framing Plan.jpg



Attachment Description: BIN 1065318, Framing Plan, Spans 101 - 103